DIVISION OF
Health Care
Finance and Policy

DHCFP Report on Bundled Payments, Volume 1

February 2011

Deval L. Patrick, Governor
Commonwealth of Massachusetts

Timothy P. Murray
Lieutenant Governor

JudyAnn Bigby, Secretary
Executive Office of Health and Human Services

David Morales, Commissioner
Division of Health Care Finance and Policy

Table of Contents

Introduction

Section 64 of Chapter 288 of the Acts of 2010: An Act To Promote Cost Containment, Transparency And Efficiency In The Provision Of Quality Health Insurance For Individuals And Small Businesses directs the Division of Health Care Finance and Policy (the Division) to undertake activities intended to foster the adoption of bundled payment by health care providers and payers in the Commonwealth.

This report will describe several models of bundled payment in as much detail as the available literature allows, highlighting the methodological similarities and differences of each method. This report is derived mainly from published documentation of each method. Forthcoming reports from the Division will detail bundled payment efforts, if any, taking place in Massachusetts and will incorporate commentary from select providers and payers who are implementing such initiatives.

About This Report

This report features six sections. Section 2 of this report reviews the methodology and covered episodes for each of the five bundled payment models identified nationwide.

Section 3 provides information on demonstration programs related to bundled payments and other payment and delivery models under Patient Protection and Accountable Care Act (PPACA). Section 4 discusses the establishment of bundled payments and their incorporation with other reform initiatives under PPACA. Section 5 presents a broad, contextual overview of bundled payments and options for implementation of bundled payments. Section 6 is a technical appendix containing detailed information on methodologies and programs outlined in the body of this report.

Subsequent reports published by the Division will feature information about bundled payment initiatives – if any – that may be underway in the Commonwealth and will include commentary from key health care stakeholders regarding these models.

What is a Bundled Payment?

A bundled payment is a method of reimbursing a provider, or group of providers, for the provision of multiple health care services associated with a defined episode of care under a single fee or payment.[1] Also referred to as an episode-based payment, a bundled payment can be structured to cover multiple providers in multiple settings.[2] For example, a single payment would be made for a knee replacement surgery, including pre-admission testing, hospitalization, surgery, post-discharge rehabilitation, and follow-up care. One primary purpose of facilitating the adoption of the bundled payment methodology as a way of reimbursing providers is to stop paying multiple providers for piece work in caring for people. Care should be delivered by providers working together in teams to achieve specific outcomes for specific conditions. The bundled payment recognizes the team-based approach to encourage care coordination and eliminate the incentive under the fee-for-service system for providers to drive up volume without improving quality.[3]

Under the bundled payment arrangement, providers would assume the responsibility for taking care of patients with particular conditions and for achieving a specified outcome.[4] Providers would have an incentive to reduce unnecessary services since they would receive a set payment for all services related to a particular episode of care. Providers with higher-than-average costs would be financially penalized and providers with lower-than-average costs would profit.

Episodes of care are typically defined on the basis of selected conditions such as asthma or diabetes or major medical or surgical procedures and include clinically related services, such as hospital admission, ambulatory care, pharmacy, and other clinical and professional services, over a defined period of time with a clear beginning and ending (acute conditions) or annually (chronic conditions). The bundled payment for an episode of care may be adjusted for the patient's severity of illness and the provider may be rewarded for higher quality of care. Some bundled payment models also include some allowances or bonuses to the set payment to reflect providers' quality performance. By holding multiple providers jointly accountable for the outcome and the total cost of care for a given episode of care, the payment structure of bundled payments would encourage coordination of care and quality improvement.

Bundled payments differ from global payments, although they are sometimes discussed as existing along a shared continuum of payment reform options. Global payments prospectively compensate providers for all or most of the care that their patients may require over a contract period, such as a month or a year. Under a global payment, a single payment would be adjusted based on the health status (e.g. co-morbidities and severity of illness) of a risk-adjusted patient population. In both the bundled payment and global payment arrangements, providers may be paid a risk-adjusted single payment for a defined scope of services during a specific period of time. The major difference between these two payment methods is that bundled payments cover the episodes of care for patients with certain conditions, while global payment covers the total care regardless of how many services are provided to patients. The use of global payments does not negate the need for bundled payments. Providers within integrated systems can receive bundled payments from the source global payment as a way of supporting team work for certain conditions and to avoid reproducing the fee-for-service pitfalls inside integrated systems. This report focuses on the development and the implementation of bundled payments only and will not address global payments, as it is beyond the scope of the requirements of Section 64.

Currently there are only a handful of episode-based bundled payment models being used nationally that are publicly documented in the literature. Among these are the Prometheus evidence-informed payment model, Minnesota's "Baskets of Care" model for selected service groups, Geisinger Health System's ProvenCare payment model for acute care procedures, the Integrated Healthcare Association (IHA) bundled episode payment pilot, and the Medicare Acute Care Episode demonstration. Evidence of the effects of the aforementioned payment models on cost and quality is still the subject of ongoing analysis nationwide. [5-6]

Selected Bundled Payment Models

Prometheus Payment Model

The Prometheus Payment Model was developed by Health Care Incentives Improvement Institute, Inc., a non-profit organization. The first Design Team consisting of experts and stakeholders from multiple disciplines was organized in 2004 to develop a new payment model which would simultaneously improve quality, lower administrative burden, and pay providers fairly based on best practices or clinical guidelines for treating patients of specific conditions. The Prometheus Payment Model bundles payment around a comprehensive episode of medical care that covers all patient services related to a single illness or condition. Covered services are determined by commonly accepted clinical practice guidelines or expert opinions.[7] Under the Prometheus Payment Model, the payment is calculated as a patient specific, "evidence-informed case rate" (ECR). ECRs are calculated by taking into account the following factors: covered services in an event (typical care), practice pattern variation, severity-adjustment, provider margin, and potentially avoidable complication (PAC) allowance.[8] (These factors are described in detail below.)

To determine the relevant costs of a specific episode, the Prometheus Payment Model separates out two types of risk:

> (1) *Probability risk*, the fundamental form of insurance risk, is caused by the likelihood of a patient complication as a result of his/her genes, health status, and any external event outside the provider's control.
>
> (2) *Technical risks* are risks within a provider's control, and therefore assumed by the provider. These include potentially avoidable complications (PACs) and other variations. PACs are deficiencies in care that cause harm to the patient and might have been prevented with higher quality treatment.

By separating these two types of risk, accountability for costs of care can be identified and segregated between payers and providers. In the Prometheus Payment Model, payers assume full financial responsibility for probability risk, which includes costs for typical episodes and severity and complexity of the individual patient's condition. Providers assume the risk for the costs of all PACs.

Construction of an ECR consists of five steps:

(1) Defining typical care of an ECR

Covered services are the foundation of an ECR rate. "Typical care" in each ECR is determined by calculating costs for delivering care that are recommended by commonly accepted clinical guidelines or expert opinions for treating a given condition from beginning to end. Costs associated with "typical care" are used as the base for the patient specific severity adjustment.

(2) Reflecting variations in local practice patterns

The covered services are then adjusted to reflect geographic practice variations.

(3) Severity adjustment

An ECR is severity-adjusted based on both patient and provider characteristics. The severity-adjustment is arrived at through a stepwise multiple regression model. This adjustment takes multiple factors into account, including patient demographics and co-morbidities, geographic location, and provider specialty. Therefore, each ECR is unique to a patient.

(4) Margin

An ECR also factors in a profit margin, which reflects the importance for any ongoing concern to have a return on capital assets invested and a reason to reinvest in business operations. Currently a margin of 10 percent is factored into the ECR, although this number can be adjusted by the payer.

(5) PAC allowance

A PAC allowance is then included in each ECR. The allowance is determined by running claims data through the Prometheus payment system to measure PAC rates. Costs associated with PACs are used to generate the PAC pool. The total dollars allocated to the PAC pool is calculated as the difference in the cost of patients with PACs from the average cost of patients with "typical care." Fifty percent of this amount is added to the ECR as the PAC allowance. A portion of the PAC allowance (25 percent) is given as a fixed amount to each patient, and the remaining amount (75 percent of the PAC allowance) is allocated as a proportion of the severity-adjusted base cost for each patient.[9] The flat fee portion is calculated as 25 percent of the PAC cost spreading over all cases. The proportional rate is calculated by dividing the 75 percent of PAC allowance by the total base costs. The total base costs are the product of total number of cases (number of typical care cases plus number of PAC cases) multiplied by the average costs of typical care. If PACs occur, the allowance is used to offset the costs of corrective treatment. But if providers reduce or eliminate PACs, the unused portion of the allowance is distributed among the providers as a bonus, based on an algorithm agreed upon by the payer and the provider.

Incentive Payment for Quality Performance

In addition to earning the ECR payments, the Prometheus Payment Model creates incentive payments (bonuses) for quality performance from the PAC pool once the provider's performance meets the quality threshold. In the initial design, 70 percent of the provider's quality score depends on what that provider does and 30 percent depends on how other providers treating the patient for the ECR condition perform. There must be a minimum of a score of 50 for the provider to be eligible for any allocation of remainders in the PAC pool. The fund not paid back to providers from the unpaid PAC pool becomes savings for payers and patients.

The Prometheus's quality scorecard contains a variety of metrics that track and evaluate care across the entire scope of treatment (i.e. each ECR). These include scores for a range of indicators including each provider's performance in meeting the clinical practice guidelines for the ECR, positive patient outcomes, the avoidance of preventable complications, and patient satisfaction. Funds allocated as a reward for high quality care are proportional to where the physician is located on the scoring scale of 50 to 90 (above 90, the physician automatically gets 100% of the incentives).[10] For more detail regarding how provider quality is scored and rewarded, please see the Technical Appendix.

Payment Arrangement

The Prometheus Payment Model is similar to a global budget but is applied to an episode of care instead. The budget is arrived at prospectively and the rewards or penalties are determined retrospectively. The design of the Prometheus Payment Model can work in either a fully-integrated system such as an accountable care organization, or a "virtually" integrated system where the providers are paid independently. In the early years of implementation of the Prometheus Payment Model, it may be difficult for payers and providers to change to the prospective payment model. Until there is enough experience with the ECRs to know that they are constructed appropriately, the Prometheus Payment Model continues to pay for individual events with a reconciliation based on quality scores at the end of the year (or the end of the ECR) against the full ECR budget. The key to this arrangement is how well a provider's practice manages its expenses and knows the costs of treating a patient for a specific condition on a real-time basis. Providers who score well will receive the bonuses for quality performance, but not until quality scoring reconciliation takes place.

For a participating provider, all patients with the conditions covered by the ECRs will be paid for by a participating payer using the Prometheus Payment Model. This is to avoid the potential cherry-picking of patients by the provider. All care along the normal continuum is explicitly included in the "typical care" of ECRs. The ECR is indifferent to which type of provider renders contracted care as long as each provider is licensed or authorized under state law to provide a given service.[11] The Prometheus Payment Model is designed to promote and reward high-quality, efficient, and patient-centered care of all providers. The decisions regarding how providers configure themselves and how the care in the clinical practice guideline is delivered are entirely within the discretion of participating providers.

Covered ECRs

The design of ECRs aims to contain costs, eliminate errors, and improve quality and efficiency by encouraging providers to coordinate care within an episode. The Prometheus Payment Model currently has developed ECRs for the following acute and chronic medical conditions, as well as outpatient and inpatient procedures:[12]

- *Acute conditions:*

  Three acute medical ECRs include acute myocardial infarction (AMI), pneumonia (PNE), and stroke (STR). The acute medical ECRs are designed to span a thirty day period.

- *Chronic conditions:*

  Seven chronic medical ECRs include asthma, chronic obstructive pulmonary disease (COPD), congestive heart failure (CHF), coronary artery disease (CAD), diabetes, hypertension (HTN), and gastro-esophageal reflux disease (GERD). These chronic medical ECRs are designed to span a one year time period.

- *Inpatient procedures:*

  Five inpatient procedural ECRs include hip replacement, knee replacement, bariatric surgery, coronary artery bypass graft, and colon resection. The inpatient procedural care bundles are designed to span a 210 day period, a 180 day look forward, and a 30 day look back from the date of the surgical procedure.

- *Outpatient procedures:*

  Six outpatient procedural ECRs include the following procedures: colonoscopy, gall bladder, knee arthroscopy, elective percutaneous angioplasty (PCI), pregnancy and delivery, and hysterectomy. The outpatient procedural ECR time spans are dependent on the procedure. Any outpatient procedural ECR with inpatient or outpatient facility claims has a 30 day look back and a 90 look forward. Any outpatient procedural ECR without inpatient facility claims has a 7 day look back and a 30 day look forward period. Pregnancy and delivery has a 9 month look back and a 2 month look forward.

These existing ECRs can potentially impact payment for nearly 30 percent of the entire insured adult population. The ECR Analysis Tool developed by the Prometheus Payment Model is publicly available and can be adopted by payers and providers to create their own rates for episodes of care based on their own data.[13]

For detailed information about the Prometheus Payment Model, please visit www.prometheuspayment.org.

The Minnesota "Baskets of Care" Model

Section 62U.05 of Minnesota Statutes 2008 requires the Department of Health to establish a minimum of seven baskets of care, as well as quality measures for each basket. A basket of care is a bundled payment for services that are usually paid for separately, but are typically delivered as one episode of care. Minnesota Rules, Chapter 4765, Permanent Rules Relating to Baskets of Care, was approved and published in March 2010. "State-designated basket of care" or "basket" means a collection of health care services that are paid separately under a fee-for-service system, but which are ordinarily combined by a provider in delivering a full diagnostic or treatment procedure to a patient.[14]

A Baskets of Care Steering Committee has played an active role in developing and defining the baskets of care. The steering committee has recommended the eight initial baskets of care to the Commissioner of the Minnesota Department of Health and has provided direction to subcommittees whose purpose is to recommend definitions for each basket of care. Steering committee members include health care providers, health plans, consumers, and other organizations that have experience working with baskets of care.

The purpose of baskets of care is to uniformly define a scope and set of care components for a given condition, procedure, or episode of care. Baskets of care are intended to offer providers an incentive to be innovative in providing a given package of services in a way that supports effective, high-quality, and lower-cost health care. Although providers and payers are not required to use baskets of care, a general objective of the baskets of care concept is to encourage providers, payers, and consumers to think differently about health care service delivery.

The eight initial baskets of care include the following:[15]

(1) Asthma (children)

Ambulatory care of asthma in children ages 5 to 18 years.

(2) Diabetes

Assessment, monitoring, and outpatient management of adults ages 18 to 64 years with medically uncomplicated type 2 diabetes (without co-morbidities); does include hypertension and hyperlipidemia.

(3) Pre-diabetes

Management of adults ages 18 to 64 years with prediabetes, currently defined by the level of impaired fasting glucose (IFG) or impaired glucose tolerance (IGT).

(4) Lower back pain

Comprehensive history and evaluation, followed by conservative treatment for adults ages 18 to 64 years with symptoms of low back pain that are either acute (0-6 weeks) or chronic with acute exacerbation of a previous episode, with or without radiculopathy.

(5) Obstetric care

Prenatal services provided to women with a confirmed, single intrauterine pregnancy. The time frame is from the confirmation of pregnancy until the onset of obstetrical labor including uncomplicated vaginal delivery and cesarean section delivery. The cost of any medications is excluded from this basket of care.

(6) Preventive care (adults)

To provide preventive care assessment, counseling, and referrals for adults ages 18 to 64 once per year. Additionally, to provide a report that summarizes the assessments and contains the recommendations for screening maneuvers and immunizations based on health risk, age, and gender. Provision of indicated services is not included in this basket of care.

(7) Preventive care (children ages 2 years and under)

Clinical preventive services and health care maintenance for children from birth following hospital discharge up to but not including the second birthday. The costs of immunizations and lab tests and the active management of any illness and diagnosis or treatment of any disease or condition are excluded from this basket of care.

(8) Total knee replacement

Inclusive management from preoperative phase through rehabilitation phase for adults ages 18 to 64 years, body mass index less than 35 with mild or no systemic disease, who are electing unilateral primary (first time) total knee replacement as recommended by orthopedic consultation. The basket of care ends 90 days after the procedure.

The uniform baskets of care definitions will allow consumers to compare the baskets of care available from various providers. The developers believe that the opportunities for innovation will allow providers to deliver care in the way that should lead to better outcomes and lower costs by meeting best practice guidelines and quality measures and improving coordination of care between participating providers. The baskets of care are developed through an iterative community-driven process and are based on evidence-informed standards of practice. Providers that offer a state-designated basket of care must submit the calculation of quality measures that are required by the Department of Health for each offered basket. For payers that elect to make the baskets of care available to beneficiaries, there will be a single non-negotiable rate for each basket of care. Once a price for a basket of care has been established, providers cannot change the price of the basket of care during the designated care delivery time period.

For a basket of care, there is a contract between the payer and basket owner (i.e. the coordinating provider). Contracts will also be established between basket owner and her partners in providing basket care. The basket owner will submit the claim to the payer to which each subcontracted or affiliated provider will submit encounter data. Under this arrangement, the encounter data is used as informational and claims data is used for payment purpose. The encounter and claim will have an indicator that it is a basket. Upon receiving the claim information from the basket owner, payment flows from the payer to the basket owner who then pays other service providers affiliated with the basket.

Under the current design, a patient's entry or enrollment into the system has not yet been determined. It is possible that multiple avenues for entry into a basket of care will be available, including self-selection and referral from a provider, employer or health plan. In the case where a patient has insurance coverage, access to baskets of care will be determined by that patient's health insurance benefit package. Currently, the basket of care does not apply to services paid for by Medicare, Medicaid programs through fee-for-service or prepaid-arrangements, workers' compensation, or no-fault automobile insurance. All health care services received outside of the covered services of a basket will be paid for through the patient's existing health insurance coverage.

For detailed information of Minnesota's Baskets of Care legislation and the initial seven baskets of care, please visit www.health.state.mn.us/healthreform/baskets/index.html

Geisinger's ProvenCare Payment Model

Geisinger Health System (Geisinger) is a unique integrated delivery system located in central and northeastern Pennsylvania consisting of about 700 employed physicians providing adult and pediatric primary and specialty care, three acute care hospitals, several ambulatory surgery centers and specialty hospitals, and a health plan with more than 200,000 members.[16] Geisinger created a provider-driven pay-for-performance payment model for coronary artery bypass graft (CABG) surgery, consisting of three core components: (1) establishing implementable best practices across the entire episode of care; (2) developing risk-based pricing, including an upfront discount to the payer for the historical readmission rate; and (3) establishing a mechanism for patient engagement. CABG is an acute event with a determined time frame from diagnosis through rehabilitation and recovery. Geisinger's ProvenCare program created a single-package price that includes preoperative evaluation and workup, all hospital and professional fees, all routine post-discharge care, and management of any related complications occurring within 90 days of elective CABG surgery.[17]

Geisinger translated professional guidelines for CABG surgery into 40 best practice elements. These practice elements were integrated into Geisinger's electronic health record (EHR) system so that the clinical team can either comply with each best practice element or document the rationale for any exception. All-or-none assessment was adopted as the measure of performance in the ProvenCare program for full compliance of all 40 best practice elements. Recognizing that not

every complication can be eliminated, the episode payment rate includes a discount of 50 percent from the average related postoperative readmission cost experienced in a two-year historical comparison group. Also, the "patient compact," a joint Geisinger/patient agreement, was developed to emphasize the important need for a care partnership between Geisinger and the patients and their families.

Geisinger has expanded its experience with CABG to programs that include hip replacement, cataract surgery, elective percutaneous angioplasty (PCI), bariatric surgery, perinatal care, erythropoietin management, and low back pain.[18] Geisinger is a unique organization in that it has its own insurance company, and its physicians are salaried employees. With its distinct organizational features and the advanced management information system, Geisinger's ProvenCare program demonstrates that an integrated delivery system (IDS), enabled by a sophisticated EHR system, can consolidate complicated care processes into evidence-based and consensus-derived best practices, which can decrease unjustified variations and unnecessary complications, improve outcomes, and reduce costs.

For detailed information regarding Geisinger's ProvenCare program, please visit www.geisinger.org/provencare/media.html

IHA Bundled Payment Pilot

Based in California, the Integrated Healthcare Association (IHA) is charged with organizing pilot programs for bundled payments in California, in cooperation with physicians, hospitals, and health plans.[19] The IHA bundled payment pilot intends to test the feasibility of bundling payments to hospitals, physicians, and ancillary providers for patients undergoing inpatient procedures and acute episodes.[20]

In the first phase, the IHA pilot will focus on major surgical procedures, beginning with total knee and hip replacement in 2010. In later phases, the pilot will expand into other acute conditions and surgical procedures. The pilot will not include episodes of care for patients with chronic disease, a population for which other payment methods may be more appropriate.

The role of IHA in the bundled payment pilot is to develop a coalition of hospitals, health plans, and physician groups that will participate in each phase of the project. IHA will develop the framework for episode of care payment (episode definition, data analysis methodology, and standard quality measures) and support collaborative resolution of operational issues.[21] Participants in the pilot consist of healthcare organizations operating within California, including health plans, hospitals, integrated health systems, medical groups, and other types of provider organizations. The price of each episode of care and the actual operations of the pilot are governed by the terms of confidential contracts between participating providers and health plans. Prices are negotiated between individual participants (e.g. each hospital, IPA, and health plan). These negotiations are supported by health plan reports of historical allowed amounts calculated in accordance with the episode definition.[22]

The pilot will focus initially on commercial PPO patient populations, but it is expected to expand to HMO populations in later phases. For PPO products, the episode begins on date of admission for the procedure and extends to 90-days post-discharge.[23] The episode definition includes all physician charges, all inpatient charges (including the implant) for the initial procedure, routine follow-up care by the surgeon, and the treatment of complications or related readmissions that occur during the episode period. There is an option for providers and health plans to include physical therapy and home health care visits during the 21-day period immediately following discharge for the orthopedic procedure. For managed care products (e.g. HMO), the episode definition adds post-acute services provided during the 90-day episode period (e.g. physical therapy, home health care, skilled nursing facilities, inpatient rehab), and defined pre-surgical services. Both definitions exclude outpatient prescription drugs and durable medical equipment.

The operational model is for one provider organization (either a hospital or physician organization) to act as a general contractor. This organization will negotiate the governing contract with each health plan and execute subcontracts with physicians and other providers for all services included in the episode definition. Patients whose care will be reimbursed under the bundled rate are identified by the surgeon and hospital based on clinical criteria and contracting parameters. They are identified to the health plan during the standard pre-authorization and eligibility confirmation processes. The general contractor assumes responsibility for gathering the usual bills of all subcontractors and submitting them as a bundle to the responsible health plan. The package is submitted at discharge for all services provided to that point. Upon receipt of this package, the health plans process the individual bills as no-pay (to capture service line detail) and pay the full negotiated bundled rate (net of patient cost-sharing) to the general contractor. The general contractor then disperses payment to the subcontractors according to the terms of the subcontracts. The general contractor submits a second package of bills to the health plan at the end of the episode period to provide information about all services provided during the post-discharge period, but no additional payment is processed. Under the pilot, the participants will build the administrative and contracting infrastructure to bill for services on a bundled basis and to disperse payments among participating providers. Under the initial phase of the pilot, no quality incentive arrangements have been identified. As the patient population included in the pilot increases over time, the pilot will begin to incorporate explicit measures of quality and efficiency.

For detailed information about IHA bundled payment pilot, please visit www.iha.org

Medicare Acute Care Episode Demonstration

The Medicare Acute Care Episode (ACE) demonstration provides bundled payments for acute care episodes within Medicare fee-for-service (FFS). The 3-year ACE demonstration was implemented starting in early 2009 on selected hospitals in Texas, Oklahoma, New Mexico, and Colorado. The ACE demonstration aims to improve quality for FFS Medicare beneficiaries, produce savings for providers, beneficiaries, and Medicare using market-based mechanisms, improve price and quality transparency for improved decision making, and increase collaboration among providers.[24] An episode of care is defined as Medicare Part A (hospital) and Part B (physician) services provided during an inpatient stay for Medicare FFS beneficiaries for selected procedures. There are 28 cardiac and 9 orthopedic inpatient surgical services and procedures related to 6 procedures/episodes of care such as hip and knee replacement and CABG included in the ACE bundled payment demonstration:

- Orthopedic procedures:
  - ➢ Hip replacement
  - ➢ Knee replacement
  - ➢ Other lower extremity joint replacement
- Cardiovascular procedures:
  - ➢ Coronary artery bypass graft surgery
  - ➢ Cardiac valve replacement surgery
  - ➢ Cardiac pacemaker implantation and replacement
  - ➢ Cardiac defibrillator implantation
  - ➢ Coronary artery angioplasty

These elective procedures were selected because their volume has historically been high; there is sufficient marketplace competition to ensure interested demonstration applicants; the services are easy to specify; and quality metrics are available for them. CMS will track participating providers' performance on process and outcome quality measures.

Currently, CMS generally pays the hospital a single prospectively-determined amount under the Inpatient Prospective Payment System (IPPS) for all the care it furnishes to the patient during an inpatient stay. The physicians who care for the patient during the inpatient stay are paid separately under the Medicare Physician Fee Schedule for each service they perform. Under this demonstration, Medicare will pay the hospital a single payment for both hospital (Part A) and physician (Part B) services furnished during an inpatient stay.[25] If an ACE demonstration site chooses to establish a provider incentive program, payment to physicians must be linked to actions that improve overall quality. Payments to physicians may not exceed 25 percent of the amount that is normally paid to physicians for such cases. Each demonstration site should accept a single bundled payment rate for each episode of care included in the demonstration at that site. The rate will cover all Medicare Part A and Part B services for a given DRG including outliers. These rates shall be specific to each

hospital and DRG. In addition to the bundled payment amount, CMS will calculate a fixed Part B co-payment for each DRG covered by the demonstration, representing the beneficiary's cost-sharing (in lieu of Part B coinsurance). This Part B co-payment will be unique for each hospital and DRG regardless of actual services rendered to an individual beneficiary.

About 95 percent of prospective payment system hospitals currently participate in CMS' pay-for-reporting initiative, Reporting Hospital Quality Data for Annual Payment Update (RHQDAPU). CMS will require ACE demonstration applicants to have received the full IPPS annual payment update for reporting quality measures (such as complication, mortality, and readmission rates) to CMS. Hospitals must continue to participate in RHQDAPU throughout the demonstration period. In addition, CMS will require hospitals to provide other quality reporting data which is specific to the DRGs/procedures in the ACE demonstration.

The demonstration allows physicians and hospitals to share financial rewards for implementing improvements in efficiency and quality, and better coordinating patient care (gain sharing). The ACE demonstration will provide an opportunity for Medicare also to share savings with beneficiaries who, based on quality and cost, choose to receive care from providers participating in the demonstration. However, beneficiaries will still be able to choose a hospital that best meets their needs and will not be restricted by this demonstration. Medicare will share 50 percent of the savings it gains under the demonstration with the Medicare beneficiary up to a maximum of the annual Part B premium, currently $1,157. The exact amount of the shared savings payment will vary by site and procedure. Medicare will send the shared savings payment directly to qualified beneficiaries approximately 90 days after they are discharged from the hospital. Those Medicare beneficiaries who are receiving Medicaid benefits are not eligible to receive shared savings payments.

Episode Grouping Software

In addition to the aforementioned episode-based bundled payment models, there are some proprietary software packages that provide illness classification system and episode building software product, such as Symmetry's Episode Treatment Groups (ETG) and Thomson-Reuters MedStat's Medical Episode Grouper (MEG). The ETG and MEG seek to group administrative medical claims into episodes of medical treatment for various categories of health conditions or diagnoses.[26] These grouping products capture all clinically relevant services and prescriptions provided during a patient's episode of care. For a particular health condition, these constructed measures can be used to assess resource utilization in different health care settings based on data from inpatient, outpatient and pharmacy claims and calculate risk-adjusted performance comparisons among providers. These grouping products can assign claims into episodes of illness for over 500 categories of health conditions. However, each software package has its own system for classifying episodes into categories of medical care so the Symmetry and Medstat software can present different pictures of the health status and medical treatment circumstances for the same person. The results from

these commercial grouping products are often not comparable.[27] Accordingly, these grouping software products can serve as an analytical unit to measure and compare the utilization and efficiency of health care providers, a clinically useful unit to measure health care demand, and a basis to establish disease management strategies. They are not primarily designed to detect inappropriate diagnosis/procedure code combinations for the purposes of clinical or payment review or denial, identify potentially inappropriate health care services, provide the basis for a population rating mechanism, or serve as an encounter-based reimbursement methodology.[28]

For a side-by-side comparison of the bundled payment models discussed in the report, please see the Technical Appendix.

Provisions Under the Patient Protection and Affordable Care Act (PPACA) Regarding Demonstration Projects in Payment Reform

The Patient Protection and Affordable Care Act (PPACA) and the Health Care and Education Reconciliation Act, enacted in March 2010, include a number of provisions related to testing new payment and delivery models in health care. This section provides an overview of those provisions regarding Accountable Care Organizations (ACOs) and the establishment of Center for Medicare and Medicaid Innovation (CMMI).

Payment Bundling

Section 2704. Demonstration project to evaluate integrated care around hospitalization.

PPACA facilitates the implementation of a Medicaid bundled payment demonstration project in up to eight states to study the use of bundled payments for hospital and physicians services under Medicaid. Between January 1, 2012 and December 31, 2016, a Medicaid bundled payment demonstration project in up to eight states will take place. Each state's program must focus on conditions where there is an evident opportunity for providers to improve the quality care for Medicaid beneficiaries while reducing the total expenditures under state Medicaid programs selected to participate. The Secretary of Health and Human Services (HHS) and each participating state must ensure that Medicaid beneficiaries do not receive fewer items and services than they would have received in the absence of the demonstration project.

A state selected to participate must specify one or more episodes of care the state proposes to address in the project, the services to be included in the bundled payments, and the rationale for the selection of such episodes of care and services.

Funding Opportunity: No funds have been specified for this program yet.

Section 3023. National Pilot Program on Bundled Payments.

PPACA directs the Secretary of HHS to develop a national, voluntary pilot program encouraging hospitals, doctors, and post-acute care providers to improve patient care and achieve savings for the Medicare program through bundled payment models. The Secretary of HHS is required to establish this program by January 1, 2013 for a period of five years. Before January 1, 2016, the Secretary of HHS is also required to submit a plan to Congress to expand the pilot program if doing so will improve patient care and reduce spending. Section 10308 provides the Secretary of HHS authority to expand the payment bundling pilot if it is found to improve quality and reduce costs.

The Medicare pilot program on payment bundling for post-acute care expands upon a demonstration program on acute care bundling, which began in 2009. Approximately 15 demonstration sites were selected to participate in the acute care program.

A Medicare program on post-acute care bundling, which also includes the acute care episode, will be implemented by January 1, 2013.

The bundling is based on an episode-of-care that includes:

(1) Three days prior to the admission of the applicable beneficiary to a hospital for the applicable condition.

(2) The length of stay of the applicable beneficiary.

(3) Thirty days following the discharge of the applicable beneficiary from such hospital.

The bundled payment under this program will be comprehensive, covering the costs of applicable services and other appropriate services furnished to an individual during an episode of care and will be made to the entity which is participating in the program.

Funding Opportunity: No funds have been specified for this program yet.

Accountable Care Organizations (ACOs)

Section 2706. Pediatric Accountable Care Organization demonstration project.

Between January 1, 2012 and December 31, 2016, the Secretary of HHS will establish the Pediatric ACO Demonstration project to authorize participating states to allow qualified pediatric medical providers to be recognized as an ACO for purposes of receiving incentive payments. States may apply for this program. A participating state, in consultation with the Secretary of HHS, must establish an annual minimum level of savings in expenditures for items and services covered under the Medicaid program and the CHIP program that must be reached in order for the ACO to receive an incentive payment.

This demonstration will use the same incentive payment method used by the Medicare Shared Savings program, which is based on expected versus reduced expenditures.

Funding Opportunity: Requires the appropriation of "such sums as are necessary to carry out Section 2706."

Section 3022. Medicare shared savings program.

By January 2012, an Accountable Care Organization shared savings program will be created by the federal HHS. To be eligible to participate, ACO providers must have "shared governance," which refers to groups of providers of services and suppliers working together to manage and coordinate care for Medicare fee-for-service beneficiaries through an ACO. The Secretary of HHS shall specify criteria for service providers and suppliers. In choosing participating ACOs, the Secretary may give preference to those that participate in similar relationships with other payers. ACOs can include groups of health care providers (including physician groups, hospitals, nurse practitioners and physician assistants, and others). ACOs that meet quality-of-care targets and reduce the costs of their patients relative to a spending benchmark are rewarded with a share of the savings they achieve for the Medicare program. Section 10307 provides additional flexibility to the Secretary of HHS to implement innovative payment models for participating Accountable Care Organizations, including models currently used in the private sector.

ACOs must also meet the following requirements to participate:

(1) Agree to be accountable for the quality, cost, and overall care of Medicare fee-for-service beneficiaries;

(2) Agree to participate for at least a three-year period;

(3) Have a formal legal structure allowing them to receive and distribute patients;

(4) Include enough primary care ACO professionals for at least 5,000 beneficiaries;

(5) Provide information regarding ACO professionals as deemed necessary;

(6) Have leadership and management in place to support clinical and administrative systems;

(7) Define processes to promote evidence-based medicine and patient engagement, report on quality and cost measures, and coordinate care through the use of methods such as telehealth, remote patient monitoring, or other enabling technologies; and

(8) Demonstrate that they meet patient-centeredness criteria, such as patient and caregiving assessments and individualized care plans.

On a day-to-day basis, payments will be made to ACOs in the same manner as they are made in Medicare FFS for Parts A and B. However if the ACO meets a quality and savings benchmark, they will receive additional payment.

The cost savings benchmark is determined using the three most recent available years of per-beneficiary expenditures for Parts A and B services assigned to the ACO, adjusted by beneficiary characteristics and other factors. If the estimated average per capita Medicare expenditure for the ACO, adjusted for beneficiary characteristics, is at least the percent specified by the benchmark, the ACO will receive a percentage of the difference between the adjusted estimated average per capita Medicare expenditures and the benchmark amount. The remainder is retained by the Medicare.

The HHS Secretary is permitted to use other payment models, such as partial capitation. Under any model, the ACO may be sanctioned if it is found that it has attempted to avoid certain patients to keep costs down.

Funding Opportunity: ACOs shall be eligible to receive payment for shared savings. No funds have been specified for this program yet.

Center for Medicare and Medicaid Innovation (CMMI)

Section 3021. Establishment of Center for Medicare and Medicaid Innovation within CMS.

The purpose of the CMMI will be to research, develop, test, and expand innovative payment and delivery arrangements to improve the quality and reduce the cost of care provided to patients in each program. Dedicated funding is provided to allow for testing of models that require benefits not currently covered by Medicare. Successful models can be expanded nationally. Section 10306 adds payment reform models to the list of projects for the CMMI to consider, including rural telehealth expansions and the development of a rapid learning network. It ensures that quality measures used by the CMMI are consistent with the quality framework within the underlying bill, and requires the Secretary to focus on models that both improve quality and reduce costs.

The CMMI will test new payment models to determine their effect on Medicare and Medicaid expenditures in two phases. In Phase I, the Secretary of HHS will select models where there is evidence that the model addresses populations with deficits in care leading to poor clinical outcomes or potentially avoidable expenditures. CMMI will have broad discretion to choose models.

The statute specifies twenty possible models, including three that are most related to payment reform:

(1) Testing and evaluation of systems of all-payer payment reform for the medical care of residents by states.

(2) Promoting broad payment and practice reform in primary care including patient-centered medical home models.

(3) Promoting coordination between providers to transition them from fee-for-service to salary-based payment.

In Phase II, the HHS Secretary may expand the duration and scope of a model being tested if the Secretary determines that expansion is expected to improve the quality of patient care without increasing spending or reduce spending without reducing quality of care.

Funding Opportunity: Five million dollars is appropriated for the CMMI in Fiscal Year 2010. Ten billion dollars is appropriated for Fiscal Years 2011 through 2019.

For a summary of the provisions in PPACA related to bundled payments, please see the Technical Appendix.

Implementation of Bundled Payments

In order to facilitate the adoption of bundled payments by payers and providers in the Commonwealth, this section discusses operational and design issues, essential for developing bundled payment arrangements, as well as ideas for implementing bundled payments.

Key Design Issues of Bundled Payments

Defining Episodes of Care

Episodes of care have two major dimensions for defining what is included in a bundle: the scope of an episode and the duration of an episode. The scope of an episode defines what services comprise the episode, including, but not limited to, primary care physicians, specialists, hospitals, nursing homes, medical devices, procedures, medicines, and non-physician healthcare professionals. The duration of an episode defines the beginning and the end of the episode and the number of days of pre-hospitalization and post-discharge services covered by the episode.

An episode is defined as the presence of one or more medical diagnoses, major procedures, and/or hospitalization for a given patient. Previously, the bundled episode-of-care payment arrangement has been applied to acute conditions and surgical procedures with a clear beginning and a clear end point. For example, Medicare's Acute Care Episode demonstration and Geisinger's ProvenCare both applied bundled payment arrangements for CABG. Under the bundled payment arrangement, an episode of care for chronic conditions covers payments for all the care related to managing a particular condition for a specific period (e.g. a year). For some chronic conditions such as asthma and diabetes, the trigger of an episode could occur with or without the presence of hospitalization.

The selected conditions/procedures for the bundled payment arrangement should have well-defined clinical definitions and guidelines that will help providers and payers to identify which patients are eligible for bundled payments and group their related services.[29] Episodes of acute conditions may be easier to define than those of chronic conditions due to their clearly defined episode durations and well-developed clinical guidelines and best practices. The episode scope and duration of chronic conditions may be more complicated to identify because they often lack of clear beginning and end points and often involve different levels of severity and co-morbidity. Episodes with unpredictable progression (e.g. head trauma) that are mostly beyond providers' control may not be suitable for the bundled payment arrangement.

Setting Payment Rates for Episodes

The unit of payment under the bundled payment arrangement is an entire episode of care for services rendered during a defined period by particular providers. How payments are structured have important implications for the practicability of the bundled payment arrangement. Establishing the base payment rate for each episode of care, adjusting the payment for the patient's severity of illness and co-morbidities, reflecting the provider's performance on quality and efficiency, and determining how to distribute payments among associated providers for an episode of care are crucial operational considerations for payers and providers in setting up the bundled payment system.

• Determining the Base Payment Rate

There are several ways to develop a base payment rate for an episode of care. Payers can calculate the base rates for different episodes of care based on historical cost data, standard of care guidelines, or negotiations between payers and providers. Payers could use empirical data on services used and associated costs for selected conditions. One of the main advantages of using historical costs data is that it is easy to use and can be utilized to calculate the costs of different episodes. Payers could also establish base rates based on the costs associated with best practices or clinical guidelines for particular conditions. These rates could be higher or lower than the base rates derived from historical data. One of the main advantages of using standard of care guidelines is that it potentially assures the appropriateness and quality of care.[30] Providers could bid and compete with one another in their contractual payment negotiations with payers. The negotiated rates would depend on the relative size and the market power of providers and payers in a particular market.[31] Regardless of the approach used, payers would need to update or revise these payment rates according to cost inflations, new services introduced, or other factors that may affect the services covered and the associated costs for particular conditions.

• Case-mix Adjustment

After setting the base payment rate, the payer needs to adjust the payment rate to account for differences in patients' severity of illness. The case-mix adjustment for payment rates will ensure that providers will not bear additional financial risks for treating sicker patients who may require more complicated and expensive treatments. In addition, payers can adopt risk mitigation strategies such as risk corridors, stop-loss insurance, and outlier payments to minimize variation among patients and alleviate the potential insurance risk born by providers.[32]

• Adjusting Payments for Quality Performance

A potential concern about the bundled payment system is that it may encourage providers to withhold care. In addition to the case-mix adjustment for payment rates, payers could include rewards or penalties for providers' performance on quality measures to address this issue. Quality measures could be based on best practices or clinical guidelines, requiring that all recommended services or a special set of care for particular conditions be delivered for full payments to be received. Quality measures could also be based on publicly reported outcome and process measures for particular conditions. Providers associated with an episode of care would be reimbursed based on their quality performance individually and collectively. This approach seeks to assure quality of care and hold providers accountable for their practices.

Attributing Risk and Payment

One of the major challenges for the bundled payment arrangement is how to attribute risk and payment for episodes across multiple providers associated with an episode. Providers covered under the bundled payment arrangement for an episode of care will be collectively responsible for the outcome. How to distribute payments among providers will depend on whether there is an organizational structure or care coordination arrangement in place among providers such as an AGO or an integrated health system (IHS) (also called an integrated delivery system [IDS]).

Payers (e.g. health plans) can attribute episodes of care to providers prospectively or retrospectively. Providers can volunteer to participate in the bundled payment arrangement and receive a prospectively determined payment rate for delivered services. The payer can give the single payment for the entire episode of care to the provider acting as the general contractor or episode owner and then let this coordinating provider distribute the payment to other participating providers. The "episode owner" or primary contractor is the provider who is responsible for the coordination of the episode of care and is designated as the recipient of the entire payment for an episode from the payer. Providers can also be paid based on virtual bundling without assigning an episode owner or primary contractor for the episode. The virtual bundling arrangement pays providers separately but have each provider's payment adjusted based on all providers' joint performance.[33] Alternatively, payers can continue to pay each provider through fee-for-service but offer bonuses or withholdings based on quality and efficiency performance for the episode. The retrospective approach is operationally straightforward for both payers and providers. The main advantage of this approach is that providers are at less financial risk than in the prospective approach which has a pre-determined single payment rate covering the entire episode. The main disadvantage of the retrospective approach is that there may not be significant improvement in quality and efficiency due to lack of communication and coordination among providers.[34]

The episode-based bundled payment can be attractive because of its ability to reduce cost and variation within episodes. Bundled payments place the responsibility of the number and types of services within an episode on the provider. Providers have the flexibility to decide which services should be provided within the episode and the financial incentive to coordinate their services, but are also accountable for patient outcomes. Because of its single base rate for all care under an episode of care, bundles discourage unnecessary use of services and encourage use of cost-effective treatment options.

Conclusion

A bundled payment is a method of reimbursing a provider for the provision of multiple health care services associated with a defined episode of care, under a single fee or payment. The single payment rate is developed based on the resources needed to provide care for a condition/procedure that is consistent with established clinical guidelines or best practices and then risk-adjusted by patients' health status. The primary goal of bundled payments is to contain the cost of services delivered during an episode, while encouraging efficient delivery of high quality services and better coordination of care. Several national private payers and providers have adopted or conducted pilot programs on bundled payments for selected conditions, as detailed in this report. Public payers are also exploring the benefits of bundled payments; Medicare is pursuing and experimenting with the cost and quality promises of bundled payments through its demonstration project for orthopedic and cardiac surgeries and associated services.

This report provides an overview of five bundled payment models that have been discussed in the literature including the Prometheus evidence-informed payment model for 21 episodes of care, Minnesota's "Baskets of Care" model for bundling payments for eight service groups, Geisinger Health System's ProvenCare payment model for acute care procedures, the Integrated Healthcare Association (IHA) bundled payment pilot on orthopedic procedures, and the Medicare Acute Care Episode demonstration on bundling outpatient and inpatient payments for cardiac and orthopedic services of six conditions/procedures.

The preliminary results from interviews and surveys of private payers and provider groups in and out of Massachusetts conducted by DHCFP show that bundled payments are being implemented or are under development for certain conditions/procedures such as total hip replacement, selected organ transplant services, and outpatient surgical procedures. The covered services include hospital, physician, and/or ancillary care depending on the episode. More detail on these arrangements will be detailed in subsequent volumes in this series of reports.

Although some of the bundled payment pilot models taking place across the nation show promising results with regard to cost saving and quality improvement, further research is needed to evaluate the impact of bundled payments when the payment bundling arrangement is expanded over more episodes of care and across multiple providers in multiple settings.

This is the first report of several produced by the Division that will discuss bundled payments and review existing/proposed models. Over the coming months, the Division will continue to report in detail on its research and analyses related to bundled payments as directed by Section 64 of Chapter 288 of the Acts of 2010.

Technical Appendix

Prometheus Quality Scoring Measure Set

Table 1. Scoring of a quality measure set (diabetes care)*

Diabetes Care			
Clinical Measures	Points (a)	Compliance Ratio** (b)	Points Awarded (a*b)
Control Measures			
HgBA1c Control	25	90%	22.5
Blood Pressure Control	25	75%	18.8
LDL Control	20	65%	13.9
Process Measures			
Ophthalmologic Exam	10	60%	6.0
Nephropathy Assessment	5	96%	4.8
Podiatry Exam	5	77%	3.9
Smoking Status and Cessation Advice and Treatment	10	95%	9.5
Total	100		78.4

* The example is a modified version from the illustration by Gosfield, A. and de Brantes, F. (2009).

** Compliance ratio = the number of patients with the condition meeting the quality measure divided by the total number of patients with the condition for the provider.

Table 1 illustrates how to score the quality measure set for a condition using diabetes care as an example. For each quality measurement set, each measure is assigned available point limits. The actual points awarded for that measure are calculated by counting the results of the physician's patients' compliance with that measure.[35] The number of patients with the condition who meet the measure is the numerator. The denominator is the total number of patients with that condition for that provider during the scoring period. A provider is scored on all the condition-specific measure sets that correspond to the ECRs in which they participate. The total score across all measures are added to determine if the baseline quality threshold has been met, which will decide each provider's ultimate maximum payment.

Table 2. Quality Threshold Scoring

	Possible Points	Actual Points (a)	% of Patients (b)	Weighted Score (a*b)
COPD Care	100	91.05	40.0	36.42
Hypertension Care	100	68.65	15.0	10.30
Cardiac Care	100	74.90	7.5	5.62
Diabetes Care	100	68.80	15.0	10.32
Heart Failure Care	100	59.71	2.5	1.49
Asthma Care	100	33.79	20.0	6.76
Total	600	396.90	100	70.91

Source: Gosfield, A. and de Brantes, F. (2009)

Table 2 demonstrates the quality threshold scoring of a hypothetical physician. This weighted score is used to determine if any money from the PAC pool will be paid. Assuming the physician from the above example refers the patient with coronary artery disease (CAD) to a hospital which scored a 63 on CABG, the physician's final quality score would be: 70.91*70% + 63*30% =68.54. Since the quality score threshold by default is set to be 50, this physician with a 68.54 score will qualify for the compensation from the PAC pool for meeting the quality requirement. Following the example, the physician would earn 46.35% of the eligible CAD PAC Pool funds (68.54 – 50 = 18.54; 90 – 50 = 40; 18.54 ÷ 40 = 46.35%). For the purpose of the demonstration, assuming this physician refers his patients to the same hospital all the time when patients need admission, and the hospital's scores are the same for all the admissions, the 46.53% rate can then be applied to all of this physician's ECRs.

Prometheus ECR Payment Structure

Table 3. ECR Payment

Type of ECR	# of ECRs	Total Budget for Typical Care	Total Budget for PA	Total Actual Cost for Typical Care	Total Actual Cost for PAC
COPD	25	$34,102	$4,115	$37,515	$12,567
Diabetes Mellitus	50	$185,611	$64,309	$152,201	$32,649
Congestive Heart Failure (CHF)	10	$55,098	$43,210	$57,046	$42,876
Asthma	35	$21,862	$10,508	$21,643	$1,506
Coronary Artery Disease (CAD)	70	$154,166	$25,224	$137,208	$22,598
Hypertension	310	$844,898	$39,470	$735,061	$25,432
Total	500	$1,295,737	$186,836	$1,140,671	$137,628
Variance*				$155,066	$49,209

* Variance: total budget for typical care minus total actual cost for typical care; and total budget for PAC minus total actual cost for PAC.
Source: Gosfield, A. and de Brantes, F. (2009)

Table 3 summarizes the results for a sample physician across each ECR. The first column represents how many of each patient was treated under that ECR. The "total budget for typical care" is the payer's dollar amounts available to pay for an uncomplicated case. This physician's practice on typical ECRs generated an additional $155,066, just on the typical patients without complications. The "total budget for PAC" reflects the 50% of the prior year's expenditures on potentially avoidable complications. The Prometheus Payment model expects that complications will occur on occasion, so the design provides an allocation of funds for the complication payment. However, to the extent physicians can avoid complications, the more money they will make.

Subtracting the total dollars actually spent on complications from the total dollars budgeted for complications (even with the variances among the conditions), this physician generated another $49,209 in savings over what was budgeted in the ECR. This figure, combined with the savings on the typical cases provides a total pool of savings of $204,275 ($155,066 + $49,209). The quality scores are an essential component of the program and, given the quality scores this physician achieved with his hospital partner, the physician would be paid an additional $94,681 ($204,275 * 46.35%). Under this design, in addition to the ECR payment, the physician will have a chance to earn bonuses based on his and his partner providers' quality performance as well as their ability to coordinate care and control costs.

Comprehensive analysis of selected bundled payment models

Table 4. Comparison of selected bundled payment models

Model	Method	Covered Episodes	Quality Measurement
Prometheus Payment	ECR = Average costs of typical care + severity adjustment + PAC allowance (flat fee + proportional allowance) + margin where flat fee = 25% of total PAC costs; proportional allowance = proportional rate x 75% of total PAC cost as a rate over base costs; margin = 10% of severity-adjusted cost of typical care Notes: ECR: evidence-informed case rate. PAC: potentially avoidable complication. Each ECR is specific to the individual patient (severity adjustment is specific to patient).	• Acute conditions: AMI, Pneumonia, & Stroke. • Chronic conditions: Asthma, COPD, Congestive Heart Failure, Coronary Artery Disease, Diabetes, Hypertension, and Gastro-Esophageal Reflux Disease. • Inpatient procedures: Hip Replacement, Knee Replacement, Bariatric Surgery, CABG, and Colon Resection. • Outpatient procedures: Colonoscopy, Gall Bladder, knee Arthroscopy, PCI (angioplasty), Pregnancy and Delivery, and Hysterectomy.	Each ECR will have its own clinical best practice guideline. Meeting the quality measure set of each ECR will give providers a chance to receive bonuses from the PAC pool depending on quality scores.
Minnesota Basket of Care	Payment for a state-designated basket of care = a single non-negotiable rate The basket owner (coordinating provider) would submit the claim to the payer while each affiliated provider would submit encounter data to the payer. Then the payer would make the bundled payment to the basket owner who would then pay other providers affiliated with the basket.	Asthma (children 5-18), Diabetes (adults 18-64), Prediabetes (adults 18-64), Low Back Pain (adults 18-64), Obstetric Care, Preventive Care (adults 18-64), Preventative Care (children 2 and under), and Total Knee Replacement (adults 18-64).	Providers that offer baskets of care must submit to the Department of Health the quality measures described in the State-Designated Baskets of Care: Appendices to Minnesota Administrative Rules, Chapter 4765.

Table 4. Comparison of selected bundled payment models (continued)

Model	Method	Covered Episode	Quality Measurement
Geisinger's ProvenCare	Payment for an episode of care = a single packaged rate + 50% of average readmission costs	CABG, Hip Replacement, Cataract Surgery, PCI, Bariatric Surgery, Perinatal Care, Erythropoietin Management, and Low Back Pain.	There are 40 best practice elements/ steps for CABG. Every step must be met or noted with explanation for non-compliance.
Integrated Healthcare Association Bundled Payment Pilot	For PPO products, the episode begins on date of admission for the procedure and extends 90-days. The episode definition includes all physician charges, all inpatient charges, routine follow-up care, and the treatment of complications or related readmissions that occur during the episode period. Outpatient prescription drugs and durable medical equipment are excluded. Prices are negotiated between participating payers and providers These negotiations are supported by health plan reports of historical allowed amounts calculated in accordance with the episode definition.	Total Hip and Knee Replacement for the commercial PPO population.	Currently, no quality incentive arrangements have been identified. As the patient population included in the pilot increases over time, the pilot will begin to incorporate explicit measures of quality and efficiency.
Medicare Acute Care Episode (ACE) Demonstration	Payment for an episode of care = a bundled payment rate covering all Medicare Part A and Part B services for a given DRG (hospital specific), where bundled payment rates are developed through competitive bidding, not negotiated pricing.	• Orthopedic Procedures: Hip and Knee Replacement, & Other lower extremity joint replacement. • Cardiovascular Procedures: CABG, Valve Replacement Surgery, Pacemaker Implantation and Replacement, Defibrillator Implantation, & Angioplasty.	The participating providers are required to provide quality measures such as complication, mortality, and readmission rates to the CMS. Hospitals must continue to participate in RHQDAPU throughout the demonstration period.

Summary of PPACA Provisions related to Bundled Payments

Table 5. Provisions in the Patient Protection and Affordable Care Act (HR3590) Related to Bundled Payment

Provision	Eligible Entities	Key Dates	Funding
Payment Bundling			
Section 2704. Demonstration project to evaluate integrated care around hospitalization. Establishes a demonstration project, in up to eight States, to study the use of bundled payments for hospital and physicians services under **Medicaid**.	8 states as selected by the Secretary of HHS.	Begins on Jan. 1, 2012 and Ends on Dec. 31, 2016.	Not specified.
Section 3023. National pilot program on payment bundling. Directs HHS to develop a national, voluntary pilot program encouraging hospitals, doctors, and post-acute care providers to improve patient care and achieve savings for the **Medicare** program through bundled payment models.	Providers of services and suppliers, including a hospital, a physician group, a skilled nursing facility, and a home health agency. HHS has authority to expand the payment bundling pilot if it is found to improve quality and reduce costs.	Begins no later than Jan. 1, 2013 and lasts for 5 years.	Not specified.
Accountable Care Organization			
Section 2706. Pediatric Accountable Care Organization demonstration project. Establishes a demonstration project that allows qualified pediatric providers to be recognized and receive payments as Accountable Care Organizations (ACO) under **Medicaid**. The pediatric ACO would be required to meet certain performance guidelines. Pediatric ACOs that met these guidelines and provided services at a lower cost would share in those savings.	ACO must agree to participate for a minimum of three years. States that want to participate must apply to Secretary directly.	Begins on Jan. 1, 2012 and Ends on Dec. 31, 2016	Authorizes such sums as necessary.

Table 5. Provisions in the Patient Protection and Affordable Care Act (HR3590) Related to Bundled Payment (continued)

Provision	Eligible Entities	Key Dates	Funding
Accountable Care Organization (continued)			
Section 3022. Medicare Shared Savings Program. Establishes a shared savings program that would reward ACOs that take responsibility for the costs and quality of care received by their patient panel over time. ACOs that meet quality-of-care targets and reduce the costs of their patients relative to a spending benchmark are awarded with a share of the savings they achieve for the Medicare program.	Groups of providers meeting criteria specified by the Secretary may work together to manage and coordinate care for Medicare fee-for-service beneficiaries through an ACO. ACOs that meet quality performance standards established by the Secretary are eligible to receive payments for shared savings under subsection.	Begins on Jan. 1, 2012 and Ends on Dec. 31, 201.6	Not specified.
Center for Medicare and Medicaid Innovation			
Section 3021. Establishment of Center for Medicare and Medicaid Innovation within CMS. Establishes within CMS a Center for Medicare and Medicaid Innovation with a purpose to research, develop, test, and expand innovative payment and delivery arrangements to improve the quality and reduce the cost of care provided to patients in each program.	N/A	Should be established no later than Jan. 1, 2011.	$5 million for the design, implementation, and evaluation of payment and delivery models for fiscal year 2010. $10 million for the period of fiscal years 2011 through 2019.

Reference:

[1] Medicare Payment Assessment Commission. (2008). Chapter 4: A path to bundled payment around a hospitalization. Report to the Congress: Reforming the delivery system. Washington, DC.

[2] Massachusetts Special Commission on the Health Care Payment System (2009). Recommendations of the Special Commission on the Health Care Payment System. Commonwealth of Massachusetts.

[3] Mechanic, R.E. & Altman, S.H. (2009). Payment reform options: episode payment is a good place to start. Health Affairs. 28(2), w262-w271.

[4] RAND Corporation (2010). Overview of Bundled Payment. http://www.randcompare.org/policy-options/bundled-payment Accessed Jan. 1, 2011

[5] Casale, A.S., Paulus, R.A., Selna, M.J., et al. (2007). "ProvenCare℠": a provider-driven pay-for-performance program for acute episodic cardiac surgical care. Annals of Surgery, 246(4), 613-623.

[6] de Bramtes, F., Rosenthal, M., & Painter, M. (2009). Building a bridge from fragmentation to accountability — the Prometheus payment model. New England Journal of Medicine, 361(11), 1033-1036.

[7] de Brantes, F., Camillus, J. (2007). Evidence-informed case rates: a new health care payment model. Washington, DC: The Commonwealth Fund.

[8] de Bramtes, F., Rosenthal, M., & Painter, M. (2009). Building a bridge from fragmentation to accountability — the Prometheus payment model. New England Journal of Medicine, 361(11), 1033-1036.

[9] Rastogi, A., Mohr, B.A., Williams, J.O., Soobader, M.J., & de Brantes, F. (2009). Prometheus payment model: application to hip and knee replacement surgery. Clinical Orthopaedics and Related Research, 467(10), 2587-2597.

[10] de Brantes, F., Camillus, J. (2007). Evidence-informed case rates: a new health care payment model. Washington, DC: The Commonwealth Fund.

[11] de Brantes, F., Camillus, J. (2007). Evidence-informed case rates: a new health care payment model. Washington, DC: The Commonwealth Fund.

[12] Health Care Incentives Improvement Institute (2010). http://www.prometheuspayment.org Accessed Oct. 12, 2010.

[13] Rastogi, A., Mohr, B.A., Williams, J.O., Soobader, M.J., & de Brantes, F. (2009). Prometheus payment model: application to hip and knee replacement surgery. Clinical Orthopaedics and Related Research, 467(10), 2587-2597.

[14] Minnesota Department of Health. (2010). http://www.health.state.mn.us/healthreform/baskets/index.html Accessed Oct. 14, 2010.

[15] Minnesota Department of Health. (2010). State-Designated Baskets of Care: Appendices to Minnesota Administrative Rules, Chapter 4765, March 2010.

[16] Paulus, A.P, Davis, K., Steele, G.D. (2008). Continuous innovation in health care: implications of the Geisinger experience. Health Affairs, 27(5), 1235-1245.

[17] Minnesota Department of Health. (2010). State-Designated Baskets of Care: Appendices to Minnesota Administrative Rules, Chapter 4765, March 2010.

[18] Steele, G.D. (2009). Reforming the healthcare delivery system. Presented to Committee on Finance, United States Senate, on April 21, 2009.

[19] Integrated Healthcare Association. (2010). Overview of Principal Projects. http://www.iha.org/iha_principal_projects.html Accessed Dec. 9, 2010.

[20] Integrated Healthcare Association. (2010). IHA Bundled Episode of Care Pilot: Project Description. Available at: http://www.iha.org/pdfs_documents/BEPPDescription061710.pdf

[21] Integrated Healthcare Association. (2010). IHA Bundled Episode Payment Pilot: Frequently Asked Questions. Available at: http://www.iha.org/pdfs_documents/medical_device/BPPFAQ_June2010.pdf

[22] Integrated Healthcare Association. (2010). IHA Bundled Episode of Care Pilot: Project Description. Available at: http://www.iha.org/pdfs_documents/BEPPDescription061710.pdf

[23] Integrated Healthcare Association. (2010). IHA Bundled Episode of Care Pilot: Project Description. Available at: http://www.iha.org/pdfs_documents/BEPPDescription061710.pdf

[24] Centers for Medicare and Medicaid. (2010). Medicare Demonstrations: Details for Medicare Acute Care Episode (ACE) Demonstrations. Accessed Oct. 14, 2010. Available at http://www.cms.gov/DemoProjectsEvalRpts/MD/itemdetail.asp?filterType=none&filterByDid=9&sortBYDID=3&sortOrder=descending&itemID=CMS1204388&intNumPerPage=10]

[25] Centers for Medicare and Medicaid. (2010). Medicare Acute Care Episode Demonstration for Orthopedic and Cardiovascular Surgery. Available at: http://www.cms.gov/DemoProjectsEvalRpts/downloads/ACE_web_page.pdf

[26] MaCurdy, T., Kerwin, J., Gibbs, J., Lin, E., Cotterman, C., O';Brien-Strain, M., & Theobald, N. (2008). Evaluating the Functionality of the Symmetry ETG and Medstat MEG Software in Forming Episodes of Care Using Medicare Data. Research Report by Acumen, LLC. to Centers for Medicare and Medicaid Services. Available at: https://www.cms.gov/Reports/downloads/MaCurdy.pdf

[27] Centers for Medicare and Medicaid. (2010). Medicare Acute Care Episode Demonstration for Orthopedic and Cardiovascular Surgery. Available at: http://www.cms.gov/DemoProjectsEvalRpts/downloads/ACE_web_page.pdf

[28] Symmetry, Ingenix Inc. (2006). Episode Treatment Groups: A Condition Classification And Episode Building System. ETG White Paper. Available at: http://www.symmetry-health.com/downloads/ETG_WhitePaper.pdf

[29] Pham, H.H., Ginsburg, P.B., Lake, T.K., and Maxfied, M.M. (2010). Episode-Based Payments: Charting a Course for Health Care Payment Reform. National Institute for Health Care Reform, Policy Analysis No. 1. Available at: http://www.nihcr.org/EpisodeBasedPayments.html

[30] Symmetry, Ingenix Inc. (2006). Episode Treatment Groups: A Condition Classification And Episode Building System. ETG White Paper. Available at: http://www.symmetry-health.com/downloads/ETG_WhitePaper.pdf

[31] Miller, H.D. (2009). From Volume to Value: Better Ways to Pay for Health Care. Health Affairs. 28(5), 1418-1428

[32] Hussey, P., Sorbero, M., Mehrotra, A., Liu, H., & Damberg, C. (2009). Using Episodes of Care as a Basis for Performance Measurement and Payment: Moving from Concept to Practice. Health Affairs. 28(5), 1406-1417.

[33] Pham, H.H., Ginsburg, P.B., Lake, T.K., and Maxfied, M.M. (2010). Episode-Based Payments: Charting a Course for Health Care Payment Reform. National Institute for Health Care Reform, Policy Analysis No. 1. Available at: http://www.nihcr.org/EpisodeBasedPayments.html

[34] Symmetry, Ingenix Inc. (2006). Episode Treatment Groups: A Condition Classification And Episode Building System. ETG White Paper. Available at: http://www.symmetry-health.com/downloads/ETG_WhitePaper.pdf

[35] Gosfield, A. and de Brantes, F. (2009). "PROMETHEUS Payment®: What's The Score?" Available at http://www.prometheuspayment.org/librarydocument/content/36/Whats%20The%20Score.FINAL.pdf

Division of Health Care Finance and Policy
Two Boylston Street
Boston, Massachusetts 02116

Phone: (617) 988-3100
Fax: (617) 727-7662

Website: www.mass.gov/dhcfp

Publication Number: 11-056-HFC-01
Authorized by Ellen Bickelman, State Purchasing Agent

This Report is available online at: http://www.mass.gov/dhcfp
When Printed by the Commonwealth of Massachusetts, copies are printed on recycled paper.